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Chasing the College Dream in Hard Economic Times

RICHARD BUDDIN AND MICHELLE CROFT

Slow economic growth in the past several years has strained the financial resources of many American families and heightened financial burdens for families hoping to support their children's college education. Real gross domestic product (GDP) fell by more than 5% during the Great Recession from the fourth quarter of 2007 to the second quarter of 2009.[1] Economic growth has returned since then, but annual real GDP growth was 2.5%, 1.8%, 2.8%, and 1.9%, respectively, for 2010 through 2013 as compared with average annual growth of 3.3% for the decade before the recession.[2] The economic slowdown has been widespread, with sharp increases in unemployment and poverty rates coupled with sharp decreases in the values of home and financial assets.[3]

These economic struggles come at a critical time for high school students who rely on family resources to fund large portions of college expenses. Although federal student loans are available to help finance college expenses, there is an expectation that families whose adjusted gross income is at least $23,000 a year will contribute to their dependent students' education.[4] For the 2011–2012 school year, parents contributed approximately 37% of the total cost of college attendance: 28% from parent income and savings and 9% from parent loans.[5] Given that about 87% of high school graduates aspire to earn a college degree,[6] many families are tasked with paying for college.

Finding a way to pay for college is particularly important, as a college degree has many benefits.[7] College graduates have substantially better labor market outcomes than do high school graduates with similar backgrounds.[8] Young workers with a college degree have much lower unemployment rates than similar workers with only a high school diploma. In addition, young workers with four-year degrees earn 60% more than high school graduates with no postsecondary training, and this wage gap grows as workers advance in careers.

While the returns to college are substantial, the economic slowdown could affect college enrollments in conflicting ways. One possibility is a decrease in college enrollment or degree attainment due to lack of funding. Students who postpone college are less likely to earn a college diploma. The bulk of college enrollments have generally occurred in the fall immediately following high school graduation. About 60% of high school graduates enter college immediately following high school, but only 6% of seniors begin college after taking a year off from school.[9] Delayed entrants are less likely to complete college than are students who immediately enter college after high school, even after controlling for the background and achievement scores of delayed entrants.[10]

Alternatively, it is possible that the economic slowdown may increase college enrollments as there are fewer other options for unskilled workers with only a high school degree. For instance, recent research by Barr and Turner has shown that for the 18–23 age group, there is a relationship between unemployment and college attendance where college attendance increases as unemployment increases.[11] This is consistent with research studying prior recessions.[12]

This study focuses on how the economic downturn has affected the family financial resources of high school students and their cost of attending college. The primary data source is the US Census Bureau's American Community Survey (ACS) for 2006 through 2012.[13] The ACS provides detailed annual data on high school students and their families. We also use information on student race/ethnicity to assess whether the economic slowdown had a differential effect on some groups of students. Alternative estimates of college tuition costs are drawn from the US Department of Education's Integrated Postsecondary Education Data System (IPEDS), the College Board, and the US Bureau of Labor Statistics (BLS).[14] Finally, annual college enrollment rates are drawn from the ACS. This study tracks family finances and tuition from the period before the Great Recession through the continuing economic slowdown in 2012.

The evidence shows substantial declines in the family resources of high school students. At the same time, college costs have risen sharply as state-level funding for postsecondary education has been adversely affected by declines in tax revenue during the slowdown. The declines in college enrollment have been somewhat modest given the declines in family resources and increased college costs. Nonetheless, the adverse economic conditions have likely dampened the ability of many students to meet their college aspirations[15] and adversely affected their long-term labor market prospects.[16]

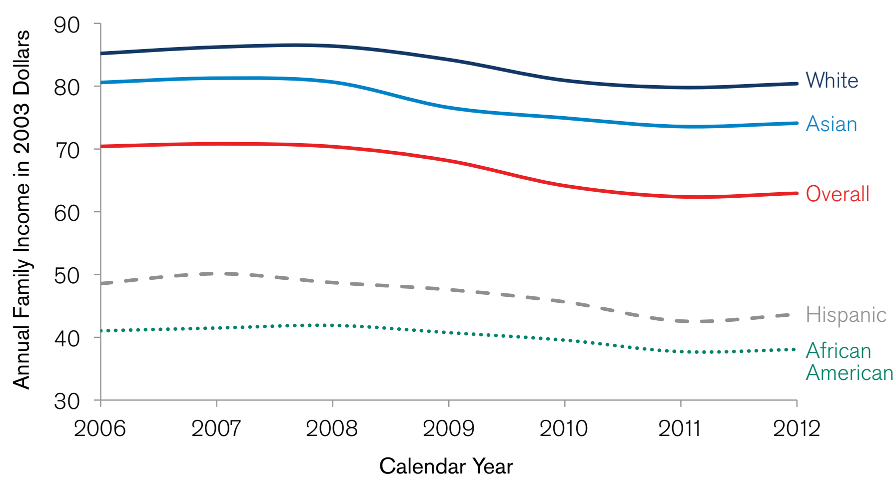
Declining Family Resources

A family's wealth—all of their assets including income, home value, and retirement savings—affects spending in multiple ways. The most apparent is that, absent loans, you are limited in spending by what you currently have, and loans are distributed based on the recipient's ability to repay. Wealth also plays another role in spending. When economic times are prosperous, people feel like they can spend freely. When economic times are poor or there is greater uncertainty, people begin to cut back. The uncertainty about the economy also affects households that are just as well off financially as they were before the recession as they may delay purchases, choosing to save for precautionary reasons, or be concerned about their relative purchasing power.[17] At issue is whether such economic considerations affect college going, either positively or negatively.

Family Income

During the recent economic slowdown, many families experienced a reduction in income (see Figure 1). From 2006–2012, average family income declined by approximately 12%. More significantly, the average family income for African American and Hispanic families is almost half that of White and Asian families from 2006–2012, meaning that such families have had about half the purchasing power of White and Asian families before, during, and after the economic slowdown. The average family income for African American students is low enough that many would qualify for a Pell Grant award to help subsidize the tuition cost.[18]

Figure 1. Trends in High School Students' Family Income by Race/Ethnicity, 2006–12.



Source: American Community Survey. Entries are for families with a high school student.

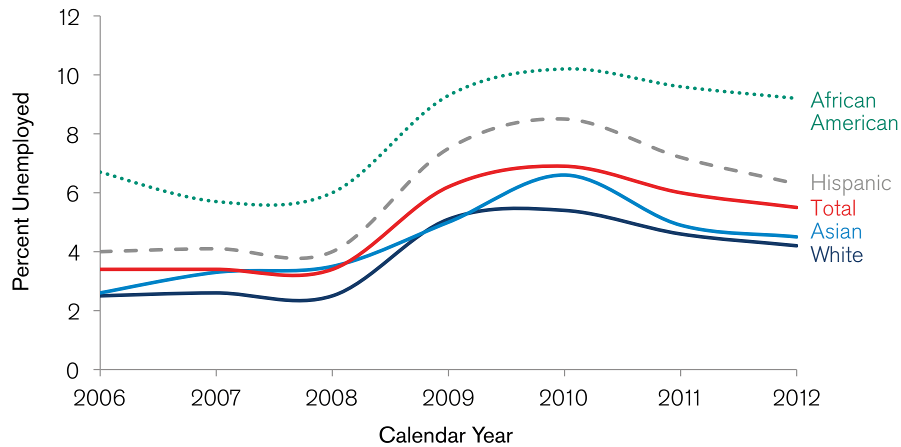
One contribution to the decline of family income was the increase in unemployment among the heads of household for high school students (see Figure 2). The unemployment rate rose from 3.4% in 2006 to 6.9% in 2010 and remained relatively high at 5.5% in 2012.[19] African American and Hispanic families were impacted the most. Unemployment for African American heads of household rose from 6.7% to 9.2%. For Hispanic heads of household, it rose from 4% to 6.3%. Unemployment rates for African American and Hispanic households peaked at 10.2 and 8.5%, respectively, in 2010.

Home Value

A home is often a family's largest asset, and home equity loans allow families to fund college through their home's equity.[20] Home equity loans were extremely popular prior to the recession. Between 2002 and 2006, households borrowed about 25 to 30 cents for each incremental dollar increase in home equity.[21] The increased home equity during that time period also had an impact on college enrollment. In the early 2000s, increases in home equity were associated with increased college attendance, with the effect more pronounced for families earning less than $70,000 a year.[22] However, home values declined dramatically after 2006, decreasing a family's purchasing power (see Figure 3). From 2006–2012, home values declined by 34.7 percentage points.

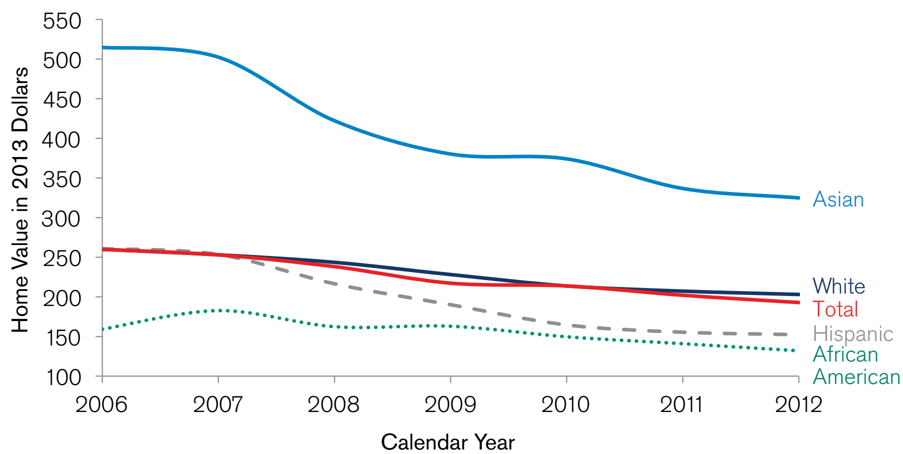
In addition to home values declining, home ownership has declined (see Figure 4). From 2006–2012, home ownership decreased by 6.1 percentage points. Ownership decreased by 4.1 percentage points for White families but declined by larger amounts for Hispanic and African American families (declines of 7.2 percentage points and 5.6 percentage points, respectively). Thus, for many families—particularly minority families—there was no longer an option of financing college through home equity loans.

Figure 2. Trends in Unemployment of High School Students' Heads of Household by Race/Ethnicity, 2006–12.



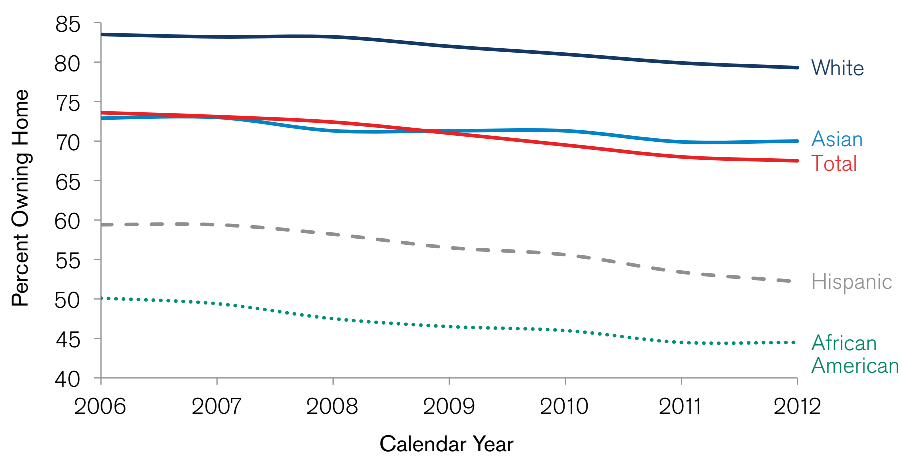
Source: American Community Survey. Entries are for families with a high school student.

Figure 3. Trends in Home Value for High School Students' Families by Race/Ethnicity, 2006–12.



Source: American Community Survey. Entries are for families with a high school student.

Figure 4. Trends in Home Ownership for High School Students' Families by Race/Ethnicity, 2006–12.



Source: American Community Survey. Entries are for families with a high school student.

Increased College Costs

As family resources have declined, the costs of college have increased. Table 1 includes three indicators of inflation-adjusted, four-year public postsecondary institution tuition and fees from the 2006–2007 to 2012–2013 school years. The indicators are IPEDS, the College Board Price Indicator, and the BLS' US City Average College Tuition and Fees.[23] Although each has a slightly different measure of tuition and fees, they all indicate an increase in college cost of more than 20% in real terms since 2006.

The tuition and fee data reflect only the sticker price that many students do not pay. However, the College Board also has a measure of net price that is an estimate of how much the student pays after receiving grants and scholarships. The net price also includes room and board in addition to tuition and fees.

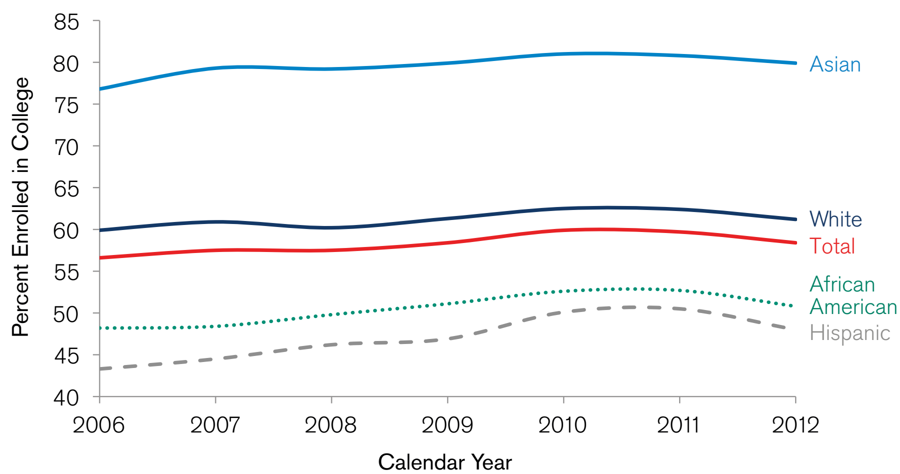
Rising tuition along with falling family incomes have substantially increased the financial burden on families with a student in college. The net price for a four-year postsecondary institution increased from $10,270 in 2006–07 to $12,110 in 2012–13 (an 18% increase). At the same time, average real income for a family with a high school student fell from $70,400 to $63,000 (an 11% decline). The net price constituted about 15% of family income in 2006–07 as compared with 19% in 2012–13.

Table 1. Four-Year Public Tuition and Fees

Year	IPEDS	College Board	BLS Index
2006–07	$6,524	$6,534	1.15
2007–08	$6,687	$6,809	1.22
2008–09	$6,805	$6,865	1.30
2009–10	$7,372	$7,500	1.38
2010–11	$7,714	$8,000	1.45
2011–12	$8,143	$8,372	1.52
2012–13	$8,294	$8,660	1.60
Percent increase	21.3	24.5	27.9

Note: Data from IPEDS use average in-state tuition and fees for full-time undergraduates attending Title IV institutions in the United States and are weighted by estimated fall enrollment for full-time undergraduates. All figures are adjusted for inflation to 2012 prices.

Figure 5. College Enrollment of 18- to 22-Year-Olds Not in the US Armed Forces.



Source: American Community Survey. Entries are 18- to 22-year-olds not in the US Armed Forces.

African American and Hispanic students come from families with lower average incomes than White and Asian students, so they are eligible for more financial aid and may face lower net college prices than the average student. However, family incomes for these minorities fell much more sharply than those for others (see Figure 1 on page 2). The data on net price are not delineated by race/ethnicity, however, so it is unclear whether increased eligibility for financial aid was sufficient to offset the declines in family income for some race/ethnic groups more than others. The evidence does suggest that many, if not most, families would have much more difficulty supporting a college student in 2013 than in 2006. Also, African American and Hispanic families are likely to feel this difficulty acutely. The increased college costs have serious implications for families. Both the published tuition and fees and the net price surpass the Stafford Loan limits, which range from $5,500 to $7,500, depending on year in school with a total undergraduate limit of $31,000.[24] As demonstrated previously, families have fewer assets to use for payment, so many families will need to either take out higher-interest or private loans or select a cheaper college.

College Enrollment

Despite the diminishing resources to pay for college and the increased cost, college enrollment continued to rise during the Great Recession (Figure 5).[25] Hispanic and African American students experienced the greatest

increase between 2006 and 2011 (7.2 and 4.5 percentage points, respectively). The increase in Hispanic college enrollment is particularly of interest as Hispanic families experienced some of the greatest losses of income (Figure 1) and depreciation of home values (Figure 3). Even with these increases, however, college enrollment rates for African American and Hispanic students remain substantially below those for Asian and White students.

Conclusion

Due to the Great Recession, families were in a much weaker position to finance college. As family wealth declined, college prices soared. Despite more limited resources, more families—including minority families who on average have lower family incomes—opted to send their student to college. This suggests that efforts to increase information and access to financial aid have been moderately successful at offsetting some of the effects of the economic downturn.[26] More work is needed to shrink the persistent and sizable gap in college enrollment between disadvantaged minorities and White students. The finding of increased college going also suggests that there are few employment opportunities available for low-skilled workers with only a high school diploma.

More research is needed to determine how the recession has affected the institutions students chose. For example, although enrollment rates rose, students may be opting for less-expensive schools, such as two-year institutions instead of four-year institutions, public universities instead of private ones, or colleges closer to home. These decisions might have important long-term implications for the individual students and the workforce, since students who enroll at two-year institutions are much less likely to ultimately earn four-year degrees than comparable students who start college in a four-year institution.[27]

Endnotes

1 See Jesse Rothstein, "The Labor Market Four Years Into the Crisis: Assessing Structural Explanations," *Industrial and Labor Relations Review* 65, no. 3 (June 2012): 467-500.

2 Bureau of Economic Activity, *Gross Domestic Product* (Washington, DC: Department of Commerce, 2014).

3 Rothstein, 2012.

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5 Sallie Mae, *How America Pays for College 2012* (Newark, DE: Author, 2013).

6 ACT, *The Condition of College & Career Readiness 2013* (Iowa City, IA: ACT, 2013).

7 There are also non-financial reasons that a student may choose not to attend college (see Laura W. Perna, "Differences in the Decision to Attend College Among African Americans, Hispanics, and Whites," *Journal of Higher Education* 71 (2000): 117-141), but even modest financial aid can increase college attendance (see Susan M. Dynarski, "Does Aid Matter? Measuring the Effect of Student Aid on College Attendance and Completion" (working paper no. 744, National Bureau of Economic Research, Cambridge MA, 1999), http://www.nber.org/papers/w7422.pdf.

8 See Richard Buddin, *Implications of Educational Attainment Trends for Labor Market Outcomes* (Iowa City, IA: ACT, 2012).

9 Buddin, 2012.

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15 US Department of Education, *Digest of Education Statistics* (Washington, DC: US Department of Education, 2012), table 207. Total fall enrollment of first-time degree/certificate-seeking students in degree-granting institutions, by attendance status, sex of student, and level and control of institution: 1955 through 2011, http://nces.ed.gov/programs/digest/d12/tables/dt12_207.asp.

16 Lisa B. Kahn, "The Long-Term Labor Market Consequences of Graduating from College in a Bad Economy," *Journal of Labor Economics* 17, no. 2 (2010): 303-316; Phillip Oreopoulos, Till von Wachter, & Andrew Heisz, "The Short- and Long-Term Career Effects of Graduating in a Recession: Hysteresis and Heterogeneity in the Market for College Graduates" (working paper no. 12159, National Bureau of Economic Research, Cambridge, MA, 2006), http://www.nber.org/papers/w12159.

17 Ivaylo D. Petev, Luigi Pistaferri, and Itay Saporta Eksten, "An Analysis of Trends, Perceptions, and Distributional Effects in Consumption," *The Great Recession*, eds. David Grusky, Bruce Western, and Christopher Wimer (New York, NY: Russell Sage Foundation, 2011), 161-195.

18 For the 2012–2013 school year, the maximum Pell Grant award was $5,500.

19 The civilian noninstitutional unemployment rate was 4.6 in 2006 and 8.1 in 2012 (US Department of Labor, Bureau of Labor Statistics, Labor Force Statistics from the Current Population Survey, http://www.bls.gov/cps/tables.htm#empstat). The rates reported here are lower because we focus on heads of household for families with high school students. These workers are older than those of the broader population and have a stronger attachment to the labor market.

20 Home equity loans are an often-cited alternative to traditional student loans. See Chris Morran, "The Pros and Cons of Using a Home Equity Loan to Pay Off Your Student Debt," *Consumerist* (June 11, 2013), http://consumerist.com/2013/06/11/the-pros-and-cons-of-using-a-home-equity-loan-to-pay-off-your-student-debt/; Troy Onink, "Use These 8 Loans to Pay for College," *Forbes,* January 22, 2013, http://www.forbes.com/sites/troyonink/2013/01/22/use-these-8-loans-to-pay-for-college/.

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22 Michael F. Lovenheim, "The Effect of Liquid Housing Wealth on College Enrollment," *Journal of Labor Economics* 29, no. 4 (2011): 741-771.

23 The BLS values are typically reported with a base period of 1982–1984. To make interpretation easier, the values were renormalized to have a base period of 2003–2005.

24 Under federal loan limits, loans for dependent students are limited to $5,500 for freshmen, $6,500 for sophomores, and $7,500 for juniors and seniors. "Subsidized and Unsubsidized Loans," *Federal Student Aid,* US Department of Education, http://studentaid.ed.gov/types/loans/subsidized-unsubsidized.

25 College enrollment is defined as individuals whose educational attainment is at least a high school diploma or GED who enrolled in college.

26 Eric Bettinger, Bridget Terry Long, Philip Oreopoulos, and Lisa Sanbonmatsu, "The Role of Application Assistance and Information in College Decisions: Results from the H&R Block FAFSA Experiment," *Quarterly Journal of Economics* 127, no. 3 (2012): 1205-1242; Caroline Hoxby and Sarah Turner, "Expanding College Opportunities for High-Achieving, Low-Income Students," (Discussion Paper No. 12-014, Stanford Institute for Economic Policy Research), http://siepr.stanford.edu/?q=/system/files/shared/pubs/papers/12-014paper.pdf.

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